ISSN 1809-127X (online edition)
© 2011 *Check List* and Authors
Open Access | Freely available at *www.checklist.org.br*

Check List
Journal of species lists and distribution

NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, Anura, Leiuperidae, *Physalaemus feioi* Cassini, Cruz and Caramaschi, 2010: Distribution extension

Emanuel Teixeira da Silva [1*], Harley Leandro Coelho [2], Renato de Souza Viana [3] and Patrícia da Silva Santos [4]

1 Centro Universitário de Caratinga, Instituto Superior de Educação, Centro de Estudos em Biologia. Rua Niterói 230. CEP 35300-345. Caratinga, MG, Brasil.
2 Grupo de Pesquisas Paleoarqueológicas Fossilis. Rua Vereador Lindolfo Soares de Carvalho 106. CEP 35300-140. Caratinga, MG, Brasil.
3 Centro Universitário de Caratinga, Pró-Reitoria de Pesquisa, Pós-Graduação e Extensão, Programa de Especialização em Saúde e Meio Ambiente. Avenida Moacyr de Matos 87. CEP 35300-047. Caratinga, MG, Brasil.
4 Universidade Federal de Minas Gerais, Departamento de Zoologia, Laboratório de Herpetologia. Avenida Antônio Carlos 6627. CEP 31270-901. Belo Horizonte, MG, Brasil.
* Corresponding author. Email: *etsbio@yahoo.com.br*

ABSTRACT: We provide new records of the recently described frog *Physalaemus feioi* in the state of Minas Gerais, southeastern Brazil. Records presented here extend the distribution of *P. feioi* around 113 km straight north from Parque Estadual da Serra do Brigadeiro, the previously northernmost known record for the species.

The genus *Physalaemus* currently comprises 42 species (Frost 2010) arranged in seven morphologic groups: *P. cuvieri* group, *P. signifer* group, *P. albifrons* group, *P. deimaticus* group, *P. gracilis* group, *P. henselii* group, and *P. olfersii* group (Nascimento *et al.* 2005). The *P. olfersii* species group currently contains eight species: *P. aguirrei* Bokermann, 1966; *P. feioi* Cassini, Cruz and Caramaschi, 2010; *P. insperatus* Cruz, Cassini and Caramaschi, 2008; *P. lateristriga* (Steindachner, 1864); *P. maximus* Feio, Pombal and Caramaschi, 1999; *P. olfersii* (Lichtenstein and Martens, 1856); *P. orophilus* Cassini, Cruz and Caramaschi, 2010 and *P. soaresi* Izecksohn, 1965 (Cassini *et al*. 2010). This species composition was defined after the taxonomic revision of the former *P. olfersii* species complex (Cassini *et al*. 2010).

Physalaemus feioi (Figure 1) is known from populations reported from areas of the Mantiqueira Mountain Range in southeastern Brazil (Cassini *et al*. 2010), some of which formerly referred to as *Physalaemus* cf. *olfersii* (Feio *et al*. 1999) and *Physalaemus* aff. *olfersii* (Feio *et al*. 2008; Lacerda *et al*. 2009; Santana *et al*. 2010). Here we report new records of *P. feioi* based on specimens collected during field surveys carried out from 2008 to 2010 in some localities in eastern state of Minas Gerais, Brazil.

Voucher specimens are deposited in the Amphibian Collection of Museu de Zoologia João Moojen, Universidade Federal de Viçosa (MZUFV), and Amphibian Collection of the Herpetology Laboratory at Universidade Federal de Minas Gerais (UFMG - Amphibia), both in Minas Gerais, Brazil. Collection permits were granted by Instituto Chico Mendes de Conservação da Biodiversidade - ICMBio (# 17152-1 and 25082-1). Comparisons of collected specimens with paratypes and topotypes housed at MZUFV were done to confirm species identification. The collected specimens present the tarsal tubercle developed and do not have callosities on heel, characteristics that promptly distinguish *P. feioi* from *P. olfersii* (Cassini *et al.* 2010). The presence of a tarsal tubercle, larger snout-vent length and details of advertisement call distinguish *P. feioi* from *P. orophilus*, a morphologically similar species reported from the southern portion of the Espinhaço Mountain Range in Minas Gerais (Cassini *et al.* 2010). Moreover, several males were found in calling activity during the field surveys, and their call is certainly equal to the call of specimens from the type locality (E. T. Silva, personal observation).

Physalaemus feioi is here reported from three new localities: 1) Sítio Carmelita (19°45'35" S, 42°05'23" W, 868 m elevation), municipality of Piedade de Caratinga (MZUFV 8775-8779, 10148, 10149, 10166), 2), a permanent pool (20°00'18" S, 42°06'34" W, 1234 m elevation; Figure 3B) and 3) a forest fragment (19°58'46" S, 42°02'44" W, 915 m elevation) both at the rural area of the municipality of Simonésia (MZUFV 10150 and UFMG 7218, respectively) (Figure 2). Specimens MZUFV 8775-8779 were collected on the forest floor on May 2008, while specimens MZUFV 10148, 10149, 10166 were collected on

FIGURE 1. *Physalaemus feioi* (MZUFV 10150 in life; CRC 24.90 mm) from Simonésia, state of Minas Gerais, southeastern Brazil. Photo: Emanuel T. da Silva.

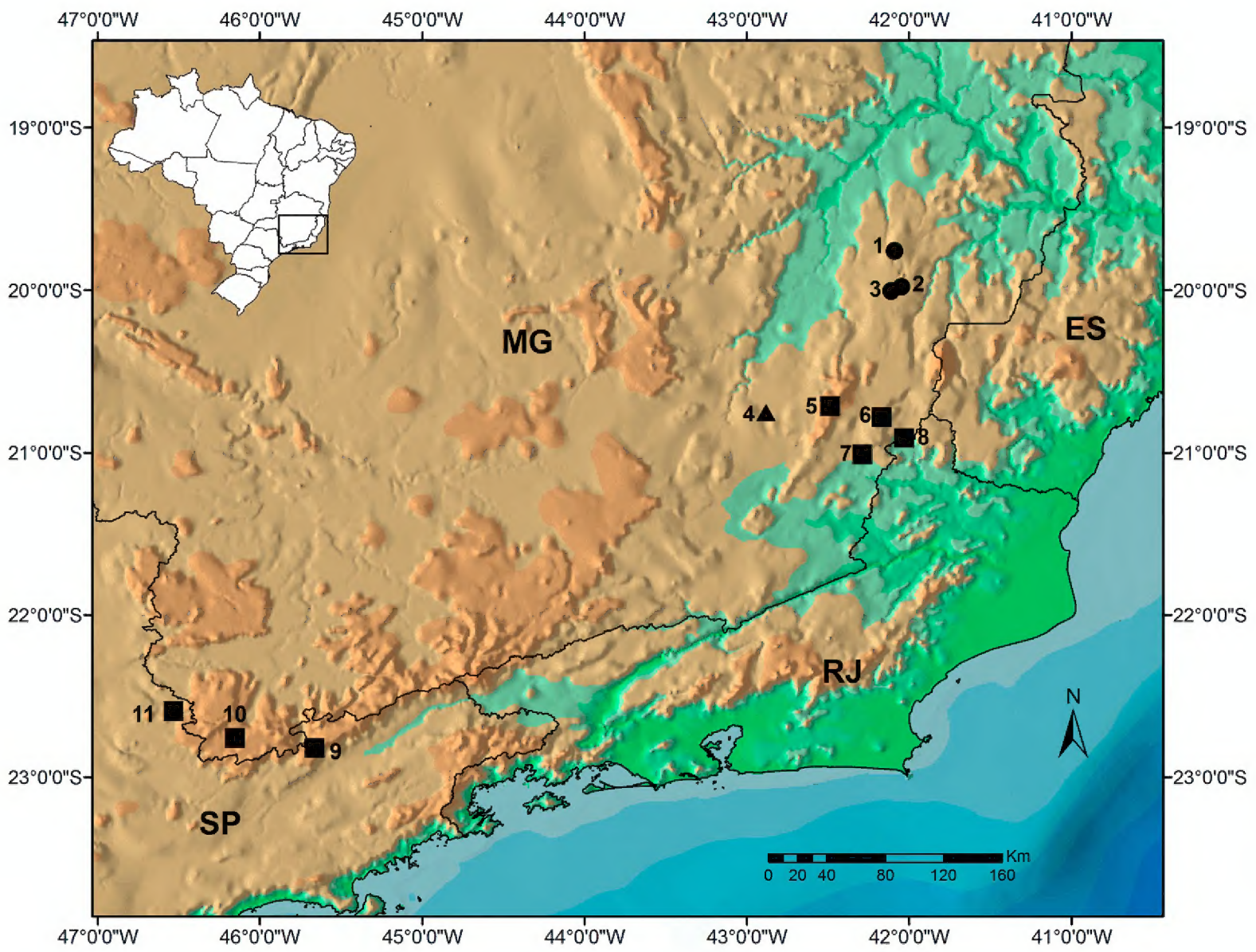

Figure 2. Geographic distribution of *Physalaemus feioi*. Squares represent literature records (Feio *et al*. 2008; Lacerda *et al*. 2009; Cassini *et al*. 2010; Santana *et al*. 2010); triangle represents the type locality; circles represent new records. ES: state of Espírito Santo; MG: state of Minas Gerais; SP: state of São Paulo; RJ: state of Rio de Janeiro. 1 = Sítio Carmelita, municipality of Piedade de Caratinga; 2 and 3 = Rural area of municipality of Simonésia; 4 = "Mata da Biologia", municipality of Viçosa; 5 = Parque Estadual Serra do Brigadeiro, municipality of Araponga; 6 = municipality of Pedra Dourada; 7 = Barro Branco county, municipality of Eugenópolis; 8 = municipality of Tombos; 9 = municipality of Santo Antônio do Pinhal; 10 = municipality of Camanducaia; 11 = municipality of Socorro. Map by Patrícia S. Santos.

Figure 3. Collection sites and natural history aspects of *Physalaemus feioi*: A = Temporary pool at the edge of the forest fragment in Sítio Carmelita, Piedade de Caratinga (Photo: Harley L. Coelho); B = Pool in the rural area of Simonésia (Photo: Emanuel T. da Silva); C = Adult male of *P. feioi* in calling activity (Photo: Emanuel T. da Silva); D = foam nest of *P. feioi* at Sítio Carmelita (Photo: Harley L. Coelho).

October 2009 in a small temporary pool located at the edge of a forest fragment (Figure 3A). Males in calling activity were observed in this pool and in an adjacent marsh from October 2009 to February 2010 (Figure 3C), while foam nests were found from October to December 2009 (Figure 3D). The specimen MZUFV 10150 was collected on November 2009 on the forest floor close to the edge of the pool in Simonésia, when several males were also found calling. The specimen UFMG 7218 was collected on the forest floor during a diurnal survey on October 2010.

Piedade de Caratinga is now the northernmost known record of *P. feioi*, extending its distribution of around 113 km airline from Parque Estadual da Serra do Brigadeiro (PESB), the previously northernmost known record (see Cassini *et al*. 2010). Field surveys in other rural areas of both municipalities indicate that *P. feioi* is a common species in this region (P. S. Santos and E. T. Silva, unpublished data). New populations of *P. feioi* will probably be found in other areas during future studies, particularly between Simonésia and PESB, filling this current gap.

Acknowledgments: We are grateful to Anderson I. G. Ferreira, Jairo J. de Andrade, Miguel Ângelo T. Silva, Pollyanna S. Campos, Sebastião M. C. Genelhú and Thiago P. Barros for their help in the fieldworks, and Henrique C. Costa, Pedro L. Peloso and an anonymous reviewer for their comments and suggestions in a previous draft of this manuscript.

Literature Cited

Cassini, C.S., C.A.G. Cruz and U. Caramaschi. 2010. Taxonomic review of *Physalaemus olfersii* (Lichtenstein & Martens, 1856) with revalidation of *Physalaemus lateristriga* (Steindachner, 1864) and description of two new related species (Anura: Leiuperidae). *Zootaxa* 2010 (2491): 1-33.

Feio, R.N., J.P. Pombal Jr. and U. Caramaschi. 1999. New *Physalaemus* (Anura: Leptodactylidae) from the Atlantic Forest of Minas Gerais, Brazil. *Copeia* 1999(1): 141-145.

Feio, R.N., P.S. Santos, C.S. Cassini, J.S. Dayrell and E.F. Oliveira. 2008. Anfíbios da Serra do Brigadeiro-MG. *MG Biota* 1(1): 4-32.

Frost, D. 2010. *Amphibian Species of the World: an Online Reference. Version 5.4 (8 April, 2010)*. Electronic Database accessible at http://research.amnh.org/herpetology/amphibian. American Museum of Natural History: New York, USA. Captured on 05 January 2011.

Lacerda, J.V.A., B. Assis, J. Tolledo, L.H.R. Lima and R.N. Feio. 2009. Registro de ninho comunal em *Physalaemus* aff. *olfersii* (Anura, Leiuperidae), Viçosa, Minas Gerais, Brasil. *Revista Brasileira de Zoociências* 11(2): 167-170.

Nascimento, L.B., U. Caramaschi and C.A.G. Cruz. 2005. Taxonomic review of the species group of the genus *Physalaemus* Fitzinger, 1826 with revalidation of the genera *Engystomops* Jimenéz-de-la-Espada, 1872 and *Eupemphix* Steindachner, 1863 (Amphibia, Anura, Leptodactylidae). *Arquivos do Museu Nacional* 63(2): 297-320.

Santana, D.J., V.A. São Pedro, P.S. Hote, H.M. Roberti, A.C. Sant'Anna, C.A. Figueiredo-de-Andrade and R.N. Feio. 2010. Anurans in the region of the High Muriaé River, state of Minas Gerais, Brazil. *Herpetology Notes* 3: 1-10.

Received: January 2011
Last Revised: March 2011
Accepted: March 2011
Published online: May 2011
Editorial responsibility: Pedro L. V. Peloso